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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,801	02/22/2002	Joel R. Williams	DISKSYS	1755

7590 03/30/2006
JOEL R. WILLIAMS
1240 MCKENDRIE ST.
SAN JOSE, CA 95126

EXAMINER

SHAW, PELING ANDY

ART UNIT	PAPER NUMBER
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2144

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/081,801	WILLIAMS, JOEL R.	
	Examiner	Art Unit	
	Peling A. Shaw	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Amendment received on 12/22/2005 has been entered. Claims 1, 8 and 15 are amended.

Claims 1-20 are still pending.

Priority

2. This application has no priority claim made. The filing date is 02/22/2002.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 8-9, 11-12, 15-16 and 18 rejected under 35 U.S.C. 102(b) as being anticipated by Ayd et al. (US 6025989 A), hereinafter referred as Ayd.

- a. Regarding claim 1, Ayd disclosed a system for providing a server (column 1, lines 26-32: rack-mounted computer as server unit) comprising: a disk drive (column 3, lines 1-3: disk drive) including a disk drive housing having at least one electrical connector disposed (column 2, line 63- column 3, line 3: removable chassis) and a CPU subsystem (column 2, line 63- column 3, line 3: logic chassis) having a housing and at least one electrical connector disposed therein and mated to said disk drive electrical connector said CPU subsystem housing (Fig. 1, column 2, line 63- column 3, line 3: power supply in removable chassis; column 3, lines 18-21: mating connectors; column 3, lines 50-52: power cable to logic chassis) conforming approximately to the height and width of said disk drive housing (Fig. 1; column 3,

lines 17-24: draws and locks the chassis together over slot 30) and including at least one ear which extends from a first end thereof, engages said disk drive housing and is secured thereto with a fastening means (Fig. 1; column 3, lines 17-24: side piece 34 of the forward extension 30 is the ear, draws and locks the chassis together); wherein, when power is supplied to said CPU subsystems said CPU subsystem supplies power and/or data to said disk drive through said electrical connectors without external wires or cables (Fig. 1, column 2, line 63- column 3, line 3: power supply in removable chassis; column 3, lines 18-21: mating connectors; column 3, lines 50-52: power cable to logic chassis).

- b. Regarding claim 2, Ayd disclosed a system of claim 1 and further comprising: an electrical disk bus connection from said CPU subsystem to at least one additional disk drive (column 3, lines 1-3: a pair of disk drives).
- c. Regarding claim 4, Ayd disclosed a server farm system consisting of at least two servers of claim 1 contained in a single enclosure (column 3, lines 1-3: a removable chassis including a pair of disk drives).
- d. Claims 8-9, 11-12, 15-16 and 18 are of the same scope as claims 1-2 and 4. These are rejected for the same reasons as for claims 1-2 and 4.

Ayd disclosed all limitations of claims 1-2, 4, 8-9, 11-12, 15-16 and 18. Claims 1-2, 4, 8-9, 11-12, 15-16 and 18 are rejected under 35 U.S.C. 102(b).

Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayd et al. (US 6025989 A), hereinafter referred as Ayd, and further in view of Savage ("Disk Arrays Challenge DASD" Savage, J.A.), hereinafter referred as Savage.

- a. Ayd shows claims 1-2, 8-9 and 15-16 as above. Ayd does not show (claim 3) where the disks are arranged to operate as a RAID disk array. However Ayd does show (Fig. 4; column 3, lines 1-3) having multiple disk drives in a single rack.
- b. Savage shows (claim 3) where the disks are arranged to operate as a RAID disk array (paragraph 4: a typical RAID) in an analogous art for the purpose of direct access storage device.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Ayd's functions of rack mounted multiprocessor computer with Savage's functions of using RAID for direct storage access.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to grouping a multiple sever nodes per Ayd's teaching used as RAID per Savage's teaching.
- e. Regarding claim 5, Ayd shows a server farm system consisting of at least two servers contained in a single enclosure (column 3, lines 45-50: an enclosure for holding a pair of modular nodes).

- f. Claims 10 and 17 are of the same scope as claims 3. These are rejected for the same reasons as for claim 3.

Together Ayd and Savage disclosed all limitations of claims 3, 5, 10 and 17. Claims 3, 5, 10 and 17 are rejected under 35 U.S.C. 103(a).

5. Claims 6-7, 13-14 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayd et al. (US 6025989 A), hereinafter referred as Ayd, and further in view of Mazingo ("Internet server Load balancing" Mazingo, Sue), hereinafter referred as Mazingo.

- a. Ayd shows claims 1, 8 and 15 as above. Ayd does not show (claim 6) a server farm system where at least one system of claim 1 is used to provide redundancy for at least one other system of claim 1. However Ayd does show (Fig. 3-4; column 3, lines 45-60) having multiple servers in a single rack.
- b. Mazingo shows (claim 6) a server farm system where at least one system of claim 1 is used to provide redundancy for at least one other system of claim 1 (3rd paragraph: a plurality of servers in a server farm providing the same data content or application service) in an analogous art for the purpose of Internet server load balancing.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Ayd's functions of rack mounted multiprocessor computer with Mazingo's functions of using multiple servers to provide the same data content or application service.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide redundant/load balancing functions per Mazingo's teaching with a multiple servers per Ayd and Mazingo's teaching.

Art Unit: 2144

- e. Regarding claim 7, Mazingo shows a server farm system where two or more systems of claim 1 are used to share a server load (2nd paragraph: two or more server systems are used to shared a server load).
- f. Claims 13-14 and 19-20 are of the same scope as claims 6-7. These are rejected for the same reasons as for claims 6-7.

Together Ayd and Mazingo disclosed all limitations of claims 6-7, 13-14 and 19-20. Claims 6-7, 13-14 and 19-20 are rejected under 35 U.S.C. 103(a).

Response to Arguments

6. Applicant's arguments filed on 12/22/2005 have been fully considered, but they are not persuasive.
 - a. Applicant states that although the Ayd patent discloses a modular computer system, the structure differs substantially from the subject invention. Applicant argues that the components of Ayd's logic and removable chassis are different from applicant's CPU subsystem and disk drive unit. However, applicant's CPU subsystem and disk drive unit are described in section 2 of specification titled "Description of Prior Art". The invention is on reducing space and electric coupling complexity. Ayd's invention is particularly directed to these objectives, i.e. rack mounting computer systems with mated connectors and physical connection of CPU unit and disk drive units. Whether exact components are contained in the connected units, i.e. logic or removable chassis in Ayd or applicant's CPU subsystem and disk units are not the invention.
 - b. Applicant further states that Ayd's slidably coupling is different from the applicant's mechanically secured connection. Ayd's slidably coupling is mechanically secured as shown in Fig. 1, 2 and 4. As Fig. 1 and 2 show that logic and removable chassis are mechanically secured with an activation handle to cause the physical locking of logical and removable chassis. In the same time the mating connectors would be engaged to provide power, data and control coupling, i.e. the slidably coupling.

Remarks

7. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

- a. Obara (US 6772365 B1) Data backup method of using storage area network
- b. Morrison et al. (US 5737185 A) Latch and ejection mechanism for portable hard drive

Art Unit: 2144

Conclusion

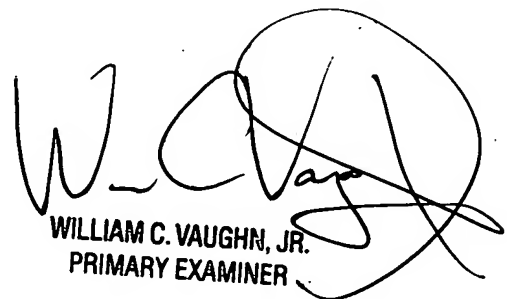
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER